

IN THE CLAIMS

Please replace all prior versions, and listings, of claims in the application with the following list of claims. Additions are indicated by underlining and deletions are indicated by strikeouts and/or double bracketing.

1-115. (Cancelled).

116. (Previously presented) The device of claim 129, wherein the anode is operable at a temperature of less than about 1500 °C.

117. (Previously presented) The device of claim 129, wherein the anode is operable at a temperature of less than about 1300 °C.

118. (Previously presented) The device of claim 129, wherein the anode is operable at a temperature of less than about 1000 °C.

119. (Previously presented) The device of claim 129, wherein the anode is operable at a temperature from about 300 °C to about 1500 °C.

120. (Previously presented) The device of claim 129, wherein the anode is operable at a temperature from about 300 °C to about 1300 °C.

121-122. (Cancelled)

123. (Previously presented) The device of claim 138, wherein the anode is operable at a temperature of less than about 1500 °C.

124. (Previously presented) The device of claim 138, wherein the anode is operable at a temperature of less than about 1300 °C.

125. (Previously presented) The device of claim 138, wherein the anode is operable at a temperature of less than about 1000 °C.
126. (Previously presented) The device of claim 138, wherein the anode is operable at a temperature from about 300 °C to about 1500 °C.
127. (Previously presented) The device of claim 138, wherein the anode is operable at a temperature from about 300 °C to about 1300 °C.
128. (Previously presented) The device of claim 129, wherein the anode comprises liquid tin at a temperature at which the anode is operated.
129. (Currently amended) An electrochemical device comprising an anode that is chemically rechargeable, and a solid-state electrolyte, which remains solid at an operating temperature of the device, in ionic communication with the anode, wherein at least a portion of the anode is liquid at a temperature at which the anode is operated, and wherein the device is capable of producing electricity in the absence of fuel.
130. (Previously presented) The device of claim 129, further comprising a source of fuel exposable to the anode.
131. (Previously presented) The device of claim 130, wherein the fuel, when exposed to the anode, is in contact with the anode.
132. (Cancelled)
133. (Previously presented) The device of claim 129, wherein the device is self-repairing.

134. (Previously presented) The device of claim 133, wherein the device further comprises a sealant precursor to seal a flaw in a solid state electrolyte when exposed to oxygen.
135. (Previously presented) The device of claim 129, further comprising a solid-state cathode in ionic communication with the electrolyte, the solid-state cathode comprising a metal oxide, a mixed metal oxide, and/or a perovskite-type oxide.
136. (Previously presented) The device of claim 129, wherein the solid-state electrolyte has a formula $(\text{ZrO}_2)_a(\text{HfO}_2)_b(\text{TiO}_2)_c(\text{Al}_2\text{O}_3)_d(\text{Y}_2\text{O}_3)_e(\text{M}_x\text{O}_y)_e$ where a is from 0 to about 0.2, b is from 0 to about 0.5, c is from 0 to about 0.5, d is from 0 to about 0.5, x is greater than 0 and less than or equal to 2, y is greater than 0 and less than or equal to 3, e is from 0 to about 0.5, and M is selected from the group consisting of calcium, magnesium, manganese, iron, cobalt, nickel, copper, and zinc.
137. (Cancelled)
138. (Currently amended) An electrochemical device comprising an anode constructed of a material such that the anode is a chemically rechargeable anode comprising a liquid metal comprising tin, and a solid-state electrolyte, which remains solid at an operating temperature of the device, in ionic communication with the anode, wherein the device is capable of producing electricity in the absence of fuel.
139. (Previously presented) The device of claim 138, further comprising a source of fuel exposable to the anode.
140. (Previously presented) The device of claim 139, wherein the fuel, when exposed to the anode, is in contact with the anode.
141. (Cancelled)

142. (Previously presented) The device of claim 138, wherein the device is self-repairing.
143. (Previously presented) The device of claim 142, wherein the device further comprises a sealant precursor to seal a flaw in a solid state electrolyte when exposed to oxygen.
144. (Previously presented) The device of claim 138, further comprising a solid-state cathode in ionic communication with the electrolyte, the solid-state cathode comprising a metal oxide, a mixed metal oxide, and/or a perovskite-type oxide.
145. (Previously presented) The device of claim 138, wherein the solid-state electrolyte has a formula $(\text{ZrO}_2)(\text{HfO}_2)_a(\text{TiO}_2)_b(\text{Al}_2\text{O}_3)_c(\text{Y}_2\text{O}_3)_d(\text{M}_x\text{O}_y)_e$ where a is from 0 to about 0.2, b is from 0 to about 0.5, c is from 0 to about 0.5, d is from 0 to about 0.5, x is greater than 0 and less than or equal to 2, y is greater than 0 and less than or equal to 3, e is from 0 to about 0.5, and M is selected from the group consisting of calcium, magnesium, manganese, iron, cobalt, nickel, copper, and zinc.